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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/032,969 | 10/25/2001 | Cynthia K. Schilling | 10006627-2 | 1054 |

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| EXAMINER | |
|---|---|
| JOO, JOSHUA | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2154 | |

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/032,969 | SCHILLING ET AL. | |
| | Examiner | Art Unit | |
| | Joshua Joo | 2154 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *27 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-3,5,6,8-12,14,15 and 17-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5,6,8-12,14,15 and 17-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

***Response to Amendment filed 2/27/2006***

1. Claims 1-3, 5-6, 8-12, 14-15, and 17-19 are presented for examination.

Claims 4, 7, 13, and 16 have been canceled by the Applicant.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3, 6, 8-12, 15, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable by Godlew et al, US Patent #5,377,196 (Godlew hereinafter), in view of Kaffine et al, US Patent #6,654,914 (Kaffine hereinafter) and Sin et al, US Publication #2002/0051464 (Sin hereinafter).

4. As per claims 1, 10, and 19, Godlew teaches substantially the invention as claimed including the method and apparatus for diagnosing a data communication network. Godlew's teachings comprise of:

executing a first program on at least one portion of said electronic network (Col 9, lines 60-61. Expert system selects tools to determine primary landmark. Col 9, lines 31-33. Landmarks are indicators of network problems.);

receiving first data resulting from the execution of said first program (Col 10, lines 7-11. Uses the tools in order acquire the data necessary to establish primary landmark.);

analyzing said first data, said at least one portion of said network is not operating within a preselected specification (Col 10, lines 30-38. Determines whether the primary landmark exists. Compares data against thresholds.);

executing a second program on said at least one portion of said electronic network if the analysis of said first data indicates that said at least one portion of said electronic network is not operating within said preselected level (Col 11, lines 8-15. Expert system selects tools to determine secondary landmark.)

receiving second data resulting first the execution of said second program (Col 11, lines 16-20. Uses the selected tools to acquire data.); and

analyzing said first data and second data to determine if said at least one portion of said network not operating within said preselected specification (Col 11, lines 47-52. Determines if a network problem exists.).

5. Godlew teaches substantial features of the claimed invention including collecting data to determine if a network problem exists. However, Godlew does not teach executing a first program a plurality of times on at least one portion, wherein said first program measures a parameter of said network, and wherein if the difference of said at least two measurements exceeds a preselected amount, the network not operating within a preselected specification; and using collected data to determine the cause of said at least one portion of said network not operating within said preselected specification.

6. Sin teaches of executing a program a plurality of times on at least one portion, wherein the program measures a parameter of the network, and wherein if the difference of the two measurements exceed a threshold, the network not operating within a preselected specification (Paragraph 0032; 0076; 0142-0144).

7. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Godlew and Sin because the teachings of Sin of Paragraph 6 would improve the system of Godlew by using measured parameters to identify levels of discrepancies in the network, which may be used to generate alerts and effect network changes.

8. Kaffine teaches of using multiple diagnostic units (Col 2, lines 34-44) to analyze data to determine the cause of a network problem (Col 22, lines 42-52).

9. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Godlew, Sin, and Kaffine because all three teachings deal with monitoring and diagnosing the network to identify network problems. Furthermore, the teachings of Kaffine to analyze data to determine the cause of the problem would improve the system of Godlew and Sin because doing so would provide information to aid the system to correct network problems and prevent similar network problems from reoccurring.

10. As per claims 2 and 11, Godlew teaches the invention of claims 1 and 10, wherein said executing a first program comprises measuring the latency associated with said at least one portion of said electronic network (Col 17, lines 22-27. Parameters used to monitor network includes traffic rate.).

11. As per claims 3 and 12, Godlew teaches the invention of claims 1 and 10, wherein said at least one portion of said network has a connector associated therewith, said connector storing a management information base, and wherein said executing a first program comprises measuring data stored in said management information base (Fig. 1. Expert system is

connected to the network. Col 17, lines 17-28. Expert system contains information regarding baseline and nominal conditions, which are used to identify network problems.).

12. As per claims 6 and 15, Godlew teaches of collecting two network data by monitoring the network and using the collected network data to determine the network problem (Col 9, lines 15-20). However, Godlew does not specifically teach the invention, wherein said executing said first program comprises running a trace route routine at first time and a second time on said at least a portion of said network, said trace route routine measuring the latency of said at least one portion of said network, said first data corresponding to the difference between the latency measured said first time and said second time said trace routine is run.

13. Sin teaches of monitoring the quality of service by running a trace route and comparing the results of the trace route with historical values of previously runned trace routes (Paragraph 0032; 0142).

14. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Godlew, Kaffine, and Sin because the additional teachings of Sin to run a trace route and compare the results with historical values would enhance the system of Godlew, Sin, and Kaffine by allowing the system to identify network problems by calculating the number of hops and determining the topology of the network. Comparing the trace route values would allow for another method of diagnosing the network by determining if the results of the comparison indicate problems by exceeding a threshold.

15. As per claims 8 and 17, Godlew teaches the inventions of claims 1 and 10, and further comprising displaying a graphical user interface representative of said network, said graphical

user interface indicating said portion of said network not operating within said preselected application (Col 31, lines 38-53. Fig. 16. User interface displays network problems, and all events are displayed on the interface.).

16. As per claims 9 and 18, Godlew teaches the method of claims 8 and 17, wherein said graphical user interface further displays information relating to at least one cause of said network not operating within said preselected specification (Col 31, lines 38-53. Fig. 16. User interface displays network problems including a hypothesis window for hypothesized network problems and events that are send to the events log. Col 31, lines 20-22. Explanation window contains responses to operator's explanations requests.).

17. Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Godlew, Sin, and Kaffine, in view of Waclawsky et al, US Patent #5,974,457 (Waclawsky hereinafter).

18. As per claims 5 and 14, Godlew does not teach the invention of claims 1 and 10, wherein said first program stores correlations between previous network conditions and previous network problems, and wherein said executing a first program comprises comparing present network conditions to stored network conditions and determining a network problem based at least in part on the comparison

19. Waclawsky teaches of storing benchmark data sets, which provide a history of network activity, which can be used to determine whether the network exceeds or will exceed some criteria that indicate performance problems (Col 8, lines 31-39). The criteria modules are responsible for evaluating the current monitored data from against the prior collected

benchmark data (Col 7 lines 56-64). Alerts and logs of information are sent to the expert system to correct the network problem (Col 7, line 61- Col 8, line 6.).

20. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Godlew, Sin, Kaffine, and Waclawsky because all the teachings deal with analyzing collected data to determine network problems, and both Godlew and Waclasky specifically teach of using an expert system to monitor the communications network. Furthermore, the teachings of Waclawsky to store a history of the network activities and using the stored information to compare with the present conditions to determine network problems would enhance the system of Godlew, Sin, and Kaffine by providing a basis of comparison between past and current network performance, which may improve diagnosing of future problems of the network.

***Response to Arguments***

21. Applicant's arguments filed 2/27/06 have been fully considered but they are not persuasive. Applicant argued that (1) the references do not disclose the newly added limitations of "executing a first program a plurality of times" and "wherein if the difference of said at least two measurements exceeds a preselected amount, said at least one portion of said network is not operating within a preselected specification".

Examiner traverse the argument(s):

22. As to point (1), Sin teaches,

i) Paragraph 0076, "Any discrepancy above a configurable threshold will cause the monitoring station to perform a "traceroute" to the destination. The current and historical ping statistics along with the current and historical traceroute results can then be analyzed for subsequent action and/or further investigations."

ii) Paragraph 0032, "the quality of service information obtained from a first packet sent to a first destination is compared with packet historical values for the first destination and, if a discrepancy above a predetermined threshold is obtained, a trace route analysis is performed for the first destination. The results of the trace route analysis may be compared to trace route historical values and, if the results exceed a present level of discrepancy, traffic to the first destination can be sent over the network by a different route."

23. From quoted sections (i) and (ii), Sin clearly teaches of executing a program a plurality of times by teaching that the system compares current and historical values of traceroutes and pings. This indicates that traceroutes and/or pings would have run more than once to have values for comparison. Furthermore, Sin teaches of comparing current and historical values and determining if the result of the comparison exceeds a threshold, and if the result exceeds a threshold, rerouting traffic or performing additional measurements. Therefore, Sin teaches the limitations of Applicant's arguments.

***Conclusion***

24. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can normally be reached on Monday to Friday 7 to 4.

26. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on 571 272-3964. The fax phone number for the organization where this application or proceeding is assigned 571-273-8300.

27. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 26, 2006
JJ

JOHN FOLLANSBEE
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